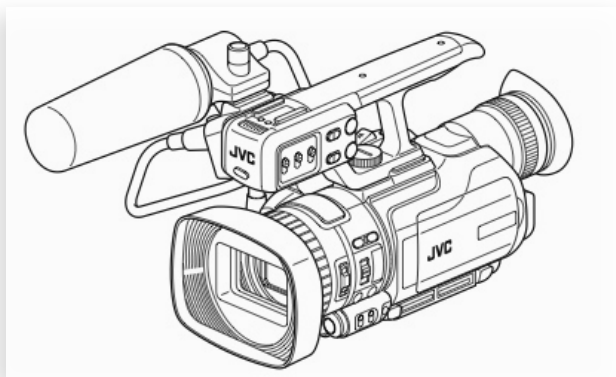# JVC HM100U
BASIC OPERATIONS

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Feb. 29, 2012 Ver.6

Intro

This is a basic summary based on both the menu settings and the actual buttons on the camera. I've omitted certain information that I found either self-explanatory or irrelevant to students. I've also kept away from advance video and audio settings. Please refer to the manufacturer's PDF manual for a more in-depth look.
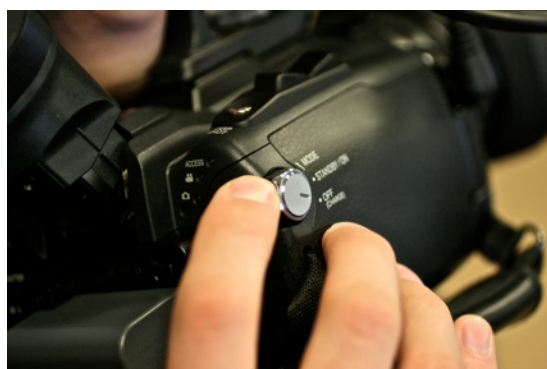

Link:

http://inside.massart.edu/Documents/inside.massart.edu/academic_resources/GY-HM100U.pdf

OPERATING THE JVC HM100U

Turning on the camera

First, hold the battery firmly in your hand making sure that the arrow is pointing left. Then slide the battery onto the holster in the camera making sure the metal parts engage, you should then hear a clicking sound.

The <u>On/Off</u> switch is located on the right side of the camera. Turn the camera on by pressing the blue button on the wheel then turn it counter clock wise to the <u>Standby/On</u> position. Turn once more to the <u>Mode</u> position to switch to still camera mode.

<u>NOTE</u>: Make sure the camera lens cover is open by flipping the <u>Open/Close</u> switch located on the left of the <u>Lens Cap</u>.

To change the battery, simply press the button marked <u>BATT</u>. located right on top of the holster then slide it towards the right and pull out.

Selecting the Camera/Recording modes

Open the LCD screen, which is located on the left side of the camera. Inside the <u>LCD compartment</u> you'll find a series of buttons. Press the <u>Menu</u> button.

The camera menu selections will then appear on the LCD screen.

Use the controller on the left edge of the LCD screen, labelled **(T,W)** to scroll up, down and across the menu selections. Select <u>File Format</u> by pressing down on the center of controller. Choose Quicktime file format.

<u>NOTE</u>: *In certain Menus, use the **T,W** controller to navigate back one page or the MENU button to exit the Menu page.*

Scroll down to the <u>System Select</u> menu to choose the camera's recording signal. Select **1080-60/30** from the list.

<u>NOTE</u>: *Changing the camera's recording signal will cause the camera to reboot itself.*

Now scroll down to select <u>Record Mode</u>. The following selection will determine the recording settings of your camera, from 1920/60i or 30p (HQ) 'High Quality' to 1440/60i(HQ) or (SP) 'Standard Quality'.

Select **1920/60i(HQ)** from the list.

or **1920/30p(HQ)** if you're shooting for the web.

N O T E : If you had previously chosen 720/60 or 24 as your camera signal then your recording choices will be 1280/60p, 30p 24p (HQ) or (SP).

The camera's audio controls are located on the left side, at the tip of the handle. The XLR inputs are on the opposite side, under the microphone holder.

To connect an external microphone to the camera, first select the audio input and choose the type of input using the controls. Move the switch to <u>Mic</u> for microphones that use their own power supply, or switch to <u>Mic+48V</u> for microphones that draw power from the camera.

Then plug the XLR cable to one of the inputs selected, either 1 or 2 on the opposite side of the controls.

Make sure the arrow on the <u>XLR Connector</u> is pointing towards the PUSH button on the camera, then push the connector forward until a clicking sound is heard.

Turn the <u>Audio Select</u> switch to <u>Manual</u> and use the <u>Audio Level</u> knob to control each individual mic level.

To disconnect, press the <u>PUSH Button</u> on the camera then pull out while holding the end of the connector cable.
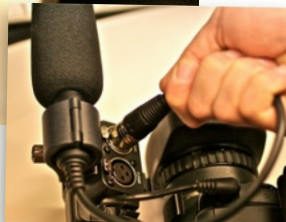
Tugging the cable may cause it to malfunction

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1.Make sure the audio switch is set to **MANUAL**

2.Make sure that your **AUDIO INPUT 1** and **INPUT 2** are set to **Mic+48khz** for on board microphone or your WIRED mics.


3.Make sure that your **CH-2 INPUT** is set to **INPUT 2**

4.Make sure that your **headphone levels** are turned up by adjusting the **ADJ./VOL.** knob on the back of the camera

Recording

The SDHC card slots are located at the bottom of the camera, under the LCD screen. This camera model allows for a minimum **Class 6** card and up to **Class 10** card. A standard 32 gig SDHC card will record up 1 hour and 50 minutes.
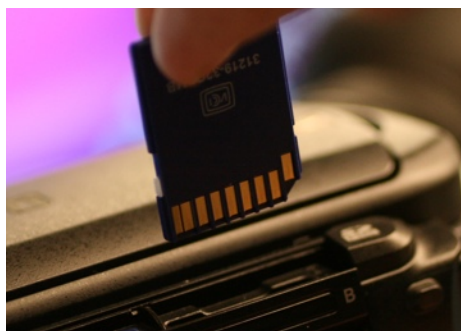
Insert the card into the slot, with the metallic censors going in first and the label facing up. Slightly push the card once with the tip of your finger until you hear a click. Push the card once more to disengage it from the slot and pull it out with the tip of your fingers.

Turn on your camera and begin recording by pressing the REC button located behind the On/Off knob. Press once and a REC sign will appear on the LCD screen, and you will see the counter begin to roll above it. Press it once more, and the counter will stop and a green 'Pause' signal will appear on the screen.

NOTE: Ejecting the SDHC cards while recording or while in Preview Mode. (CAM/MEDIA) will result in file corruption.

Zooming and Focus

There are three ways to zoom on the camera. First by using the rocker located on the right side above the hand strap. Push the **T**(Telephoto) to zoom-in and **W**(Wide) to zoom-out.

Second, flip the LCD open, then you will see the same corresponding (T,W) controls on the left of the LCD panel. You can also use the REC button on that panel to record.

Third, there is a Focus and Zoom switch located on the left side of camera, on the lens barrel. Select Zoom to use the camera's manual zoom ring or select Focus to turn that same ring into a manual focus.

NOTE: The Auto or Manual focus selection button (AF/MF) is located right under that switch.

Adjusting the White Balancing

The white balancing selection switch is located on the left side of the camera, right under the Auto/Manual Focus and Full Auto buttons.

To set custom white balance, first point at a white surface. Make sure that there is nothing else in the frame. Next, select A or B as your custom preset. Then press the AWB button located on the front of the camera until the OK sign flashes on the LCD screen.
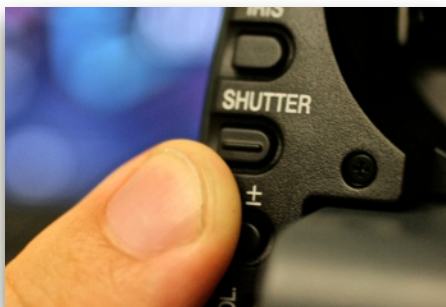
Adjusting the Iris

To manually adjust the Iris, first press the <u>Iris button</u> which is located on the back of the camera, right above the battery compartment.

Once pressed, a numerical value will be highlighted on the upper left side of the <u>LCD screen</u>.

Use the <u>Adj/Vol dial</u> located below the <u>Shutter button</u> to either open or close the Iris. As the numbers increase your image becomes darker, and as they decrease, more light gets into the camera.

> *NOTE: Press the Iris button again to engage the <u>Automatic Iris</u>, and the numerical value should disappear*

NOTE: The standard <u>Shutter speed</u> should be at 1/60. Press the shutter button again to engage the <u>Automatic Shutter</u>, and the numerical value should disappear

Selecting the shutter speed

The Shutter is located right below the Iris. Press the <u>Shutter button</u> to manually adjust it.

Once pressed, a numerical value will be highlighted on the LCD screen, right below the iris selection number.

The shutter increments are expressed in fractions, i.e (1/30, 1/60, 1/80, 1/100). With the slower shutter speeds, (1/30 or 1/15) your image will be brighter, however it will create motion artifacts to your footage, while with a faster shutter, (1/100 or 1/250) your image will be darker and have "stuttering" or "choppy" artifacts.

User shortcuts

There are three user shortcuts that can be assigned for several functions in the camera.

User 1 and User 2 are located on the left side of the camera, right above the Focus/Zoom switch. User 3 is located inside the LCD compartment, right next to the CAM/MEDIA button.

To assign a user function. First press the Menu button then select Camera Settings from the menu window. A list of choices will be displayed, then press the T,W controller to make a selection.

NOTE: The Cameras are preset with User 1 for Focus Assist, User 2 for Color bars and User 3 for Zebra.

Reviewing the clips

Push the CAM/MEDIA button, which is located in the LCD compartment. A new Menu screen will come up, displaying thumbnails of clips shot. You can navigate through the menu by using the **(T,W)** controller on the LCD panel. Press the center of the controller to select and view a clip.

Once the clip begins to play, push the **(T,W)** controller left or right to either rewind fast-forward through the clip and push the center to pause. Push up to go back to the beginning of the clip and down to jump to the end, then push down to exit back to the Viewing Menu. Press the CAM/MEDIA button once more to exit the reviewing mode.
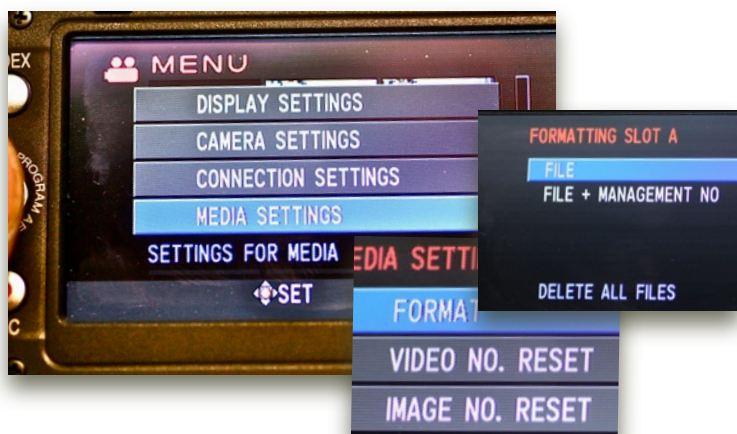
NOTE: You can Delete or Copy clips by pressing the Menu button while in the CAM/MEDIA mode.

NOTE: You can reset the camera's Timecode by pressing the Menu button, then selecting TC Preset, then select Reset.
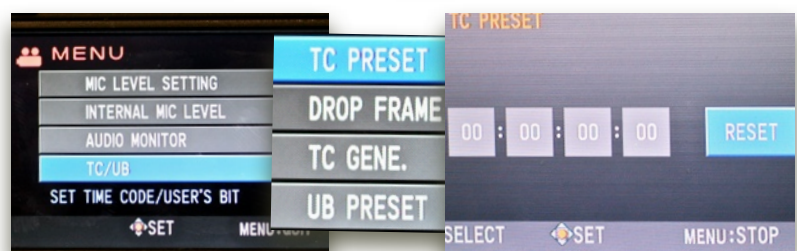
Formatting SDHC cards

There are three ways to <u>Format</u> the SDHC cards.

First, in Camera mode, press the <u>Menu</u> button, then choose <u>Media Settings</u>.   Once selected, you will see the <u>Format</u> setting. Press it, then you will have the choice of formatting Slot A or B.   After choosing which slot to format, you will be prompted to decide which formatting method to employ.

Choose <u>FILE</u> to wipe the card of all media, then press OK.

Second, while in <u>CAM/MEDIA</u> mode press the <u>Menu</u> button then select <u>Delete</u>.   There will be choices to delete <u>Current</u> file, to <u>File Select</u> or <u>Delete All</u>.

Third, while in <u>CAM/MEDIA</u> mode press the <u>Menu</u> button then proceed to <u>Media Settings</u> then follow Step one.

NOTE: In certain Menus, use the T,W controller to navigate back one page or the MENU button to exit the Menu page.

Exporting Files

There are three ways of exporting your media onto your computer.   First, by inserting your SDHC card into your MacBook Pro's SD card slot, second connecting the camera directly onto a computer using a USB cable or through an external SDHC Card Reader.

To connect the camera directly to the computer Attach the USB cable to the USB port located on the back of the camera under the battery slot and next to the HDMI port. Once connected, the camera will automatically prompt you to enter PLAYBACK ON PC mode.

Press the center of the **T,W** controller to engage the PC link. You will then see two Untitled Disks mounted on your Finder. Follow the path to drag and drop your video files to your external hard drive.
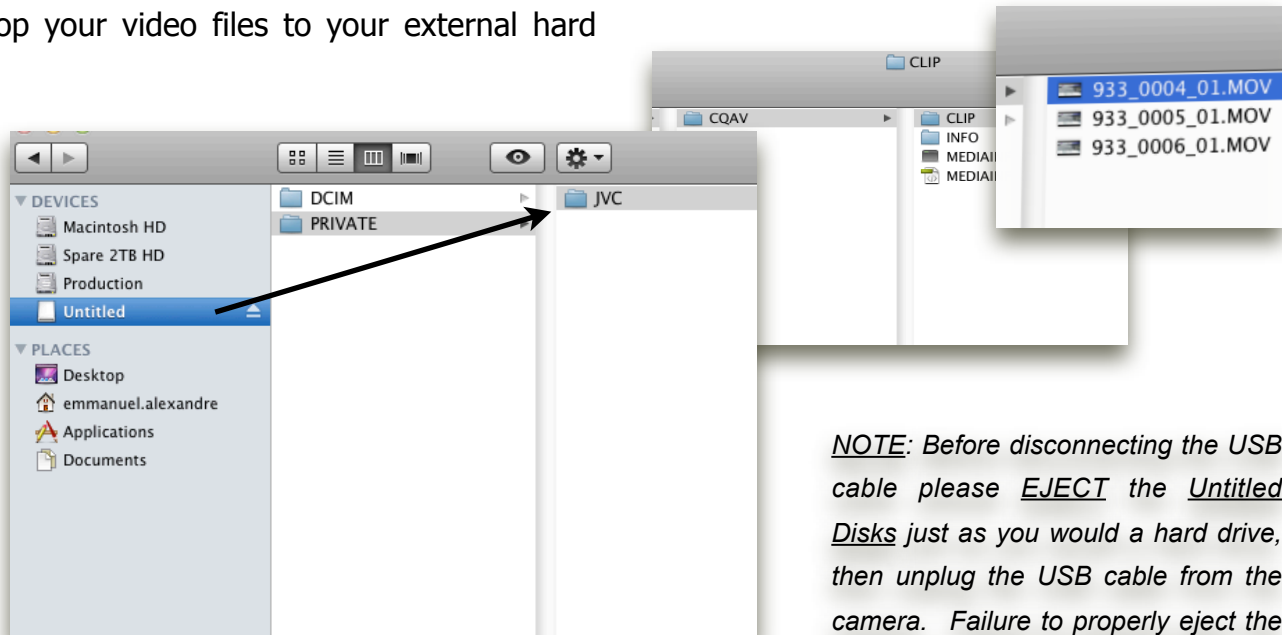
NOTE: Before disconnecting the USB cable please EJECT the Untitled Disks just as you would a hard drive, then unplug the USB cable from the camera. Failure to properly eject the disks will result in file corruption.

Importing into Final Cut Pro

Once your project folders have been created and linked through the System Settings menu in FCP, you will need to choose the proper Video Format before importing your files.

First, select Easy Setup under the drop-down menu bar in FCP. The JVCHM100U uses the XDCAM HD format
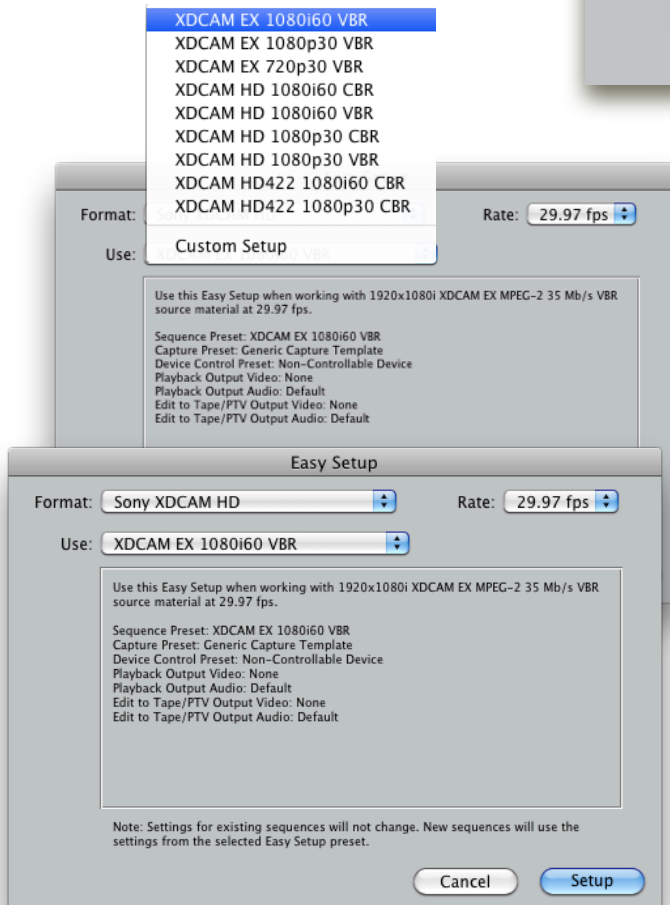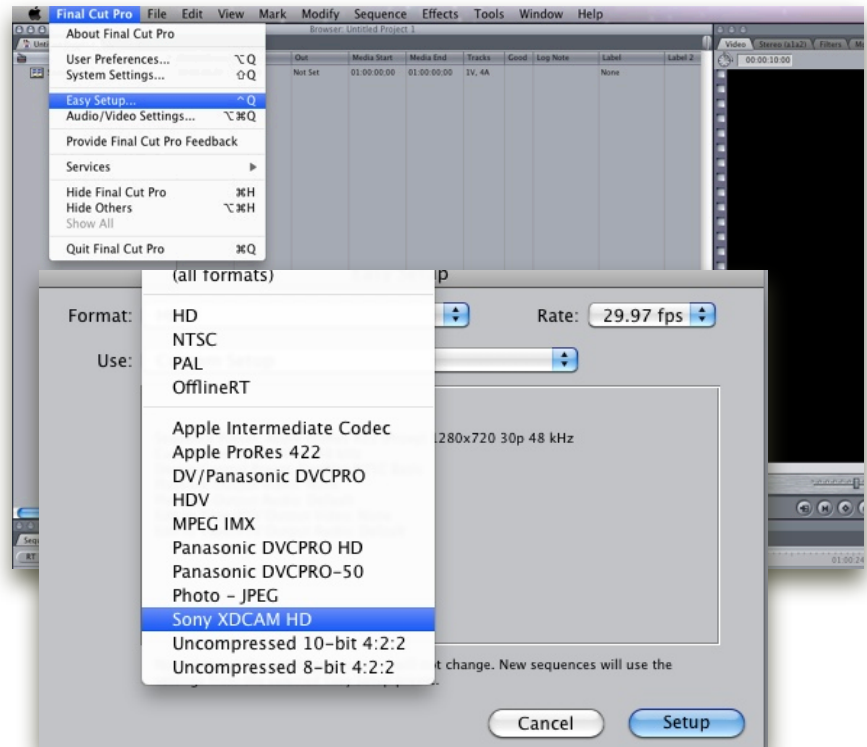
Then, you will need to choose the corresponding HD signal/resolution that your footage was shot in. Please select: XDCAM EX 1080/60i VBR or 1080p/30 VBR from the drop down menu.

NOTE: The JVC shoots HD footage in High Quality(HQ) at Variable Bit Rates(VBR) up to 35Mb/s and in Standard Quality(SP) at a Constant Bit Rate of 25Mb/s. Please consult with your Instructors or Broadcast Staff.
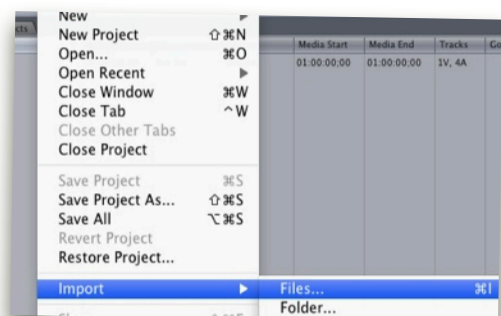
Now you are ready to import your files into Final Cut Pro.

Final Cut Pro - Video Export Process
Exporting Video for the Web and Broadcast Classes.

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Introduction
There are various formats that are used to encode video when exporting out of Final Cut Pro
Here we'll go over settings in exporting to the Web or for Broadcast Classes

Step 1
Preparing your Video for the WEB.
When you're finished editing and ready to export out of Final Cut Pro for the WEB (Youtube,Vimeo), Go to FILE_EXPORT_USING QUICKTIME CONVERSIONS.

Step 2
Select OPTIONS next to Format_QuickTime Movie, from there you'll select Video_SETTINGS, SIZE and SOUND SETTINGS.

Step 2b
Video SETTINGS: select H.264, in the MOTION section you'll keep the Frame Rate as Current and Key Frames at Automatic. In the DATA RATE section you'll select Restrict to and Type in 10000 if you'll be uploading video with a resolution of 1920x1080. But if you're uploading video with a resolution of 1280x720 then type in 5000.

Step 1

Step 2

Step 2b

Step 3

Step 3
For FILTER you can skip these settings and move on to SIZE, here you'll select the size that corresponds to your sequence settings which will be 1920x1080HD. Please be aware the size settings are subject to changes depending on what is requested by The Professor or Content Site you're uploading to.

Final Cut Pro - Video Export Process
Exporting Video for a News Broadcast
FCP 7.0

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Step 4

Step 4
In SOUND SETTINGS select AAC. Keep the sound channels at Stereo and change the RATE to 44.100khz., all the other settings remain the same.

After all your settings are selected,Export and Save your file in your EXPORTS folder in your main project folder. Instructions on File and Folder management will be provided by your Professor. Now you're ready to upload to Youtube.

For detailed instructions for uploading to Youtube http://www.google.com/support/youtube/bin/answer.py?hl=en&answer=57924

Step 5 If you're uploading to VIMEO
You'll go through the same settings for Vimeo with a few minor changes. Your settings in Vimeo only allows a certain amount of uploads and a size limit of 500mb if you aren't subscribed to Vimeo Pro. In this instance you'll
restrict your DATA RATE settings to 5000 and use a lower resolution depending on what the video is being displayed for. For example 1280x720HD or 640x480 VGA
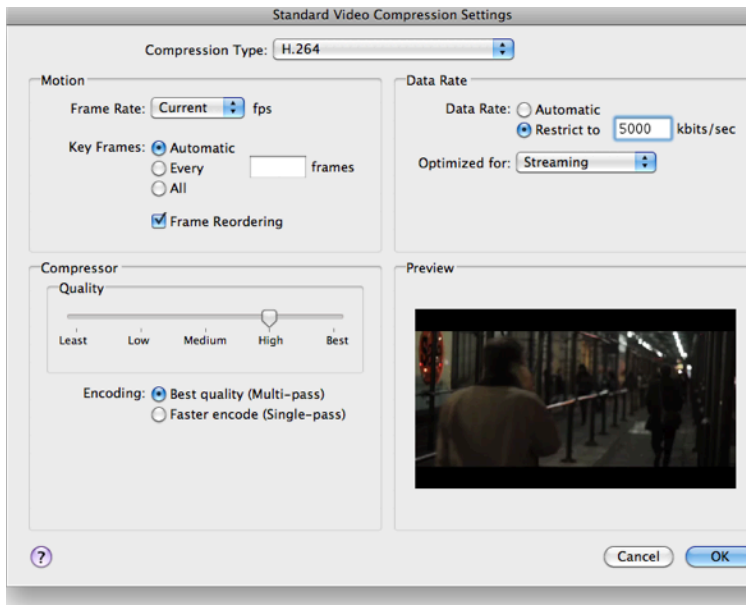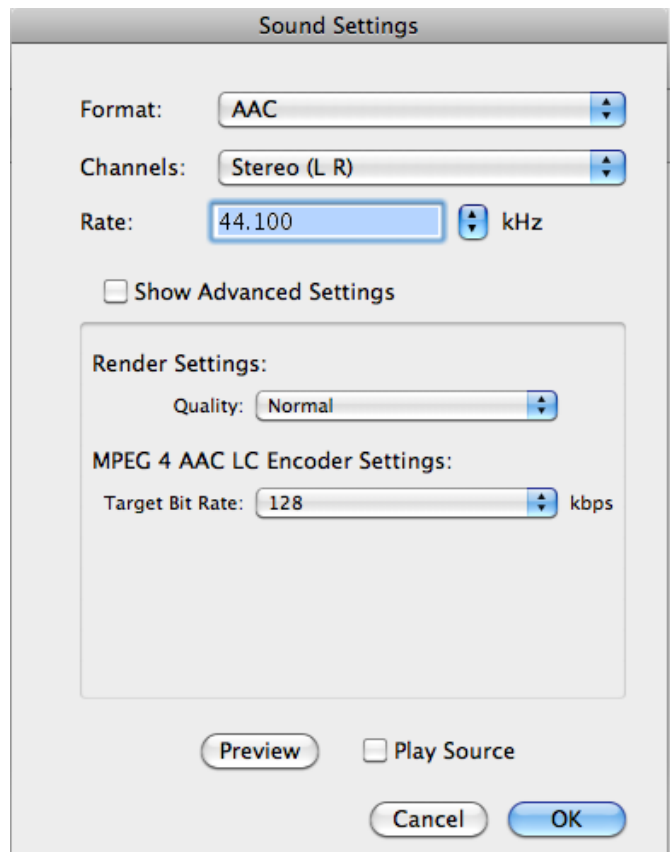
Step 5: cont.
For more Information on uploading to Vimeo please go http://vimeo.com/help/faq#upload
Please make note of the "What are the recommended settings for uploading a video" Section. It has useful and detailed information on compressing video for Vimeo.
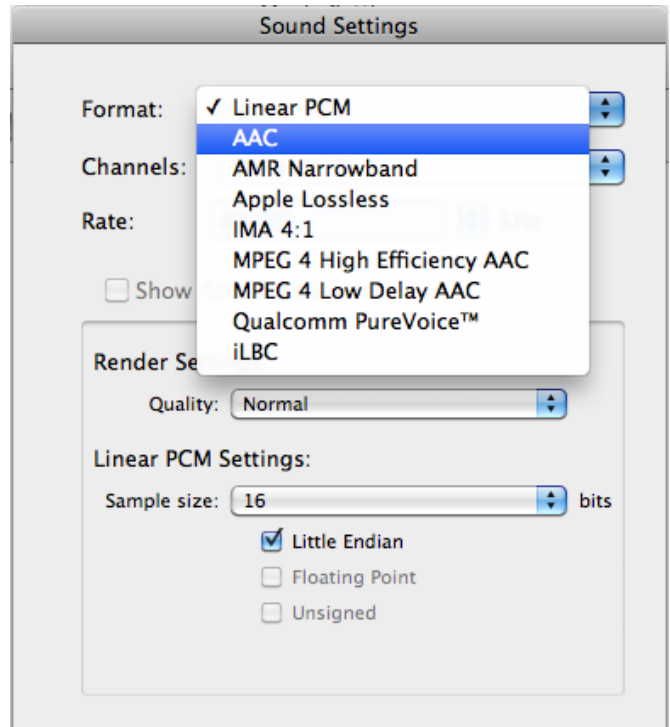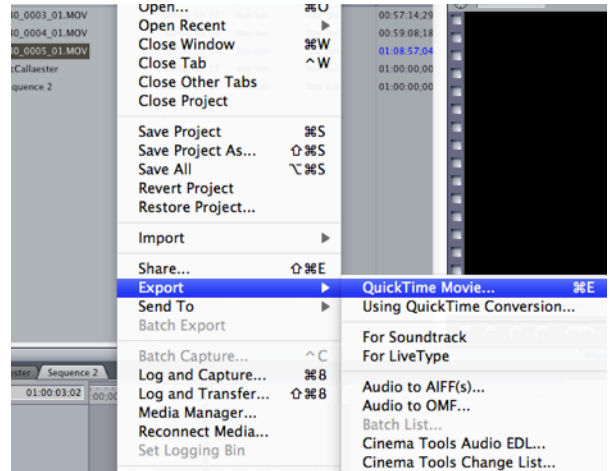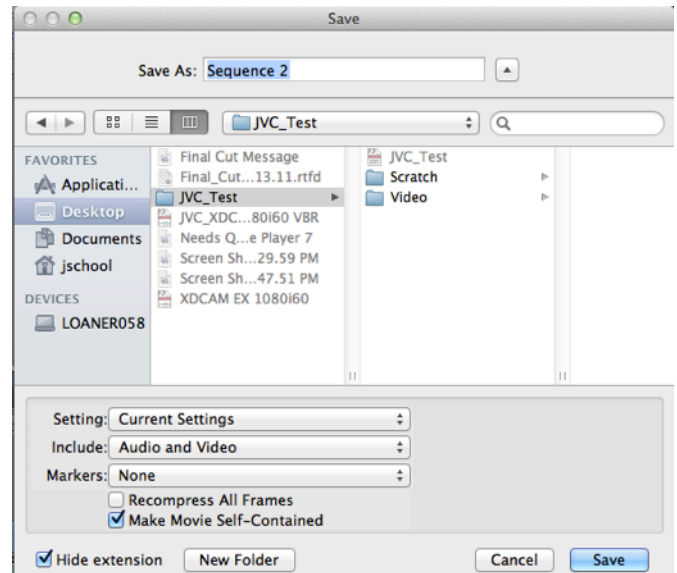
Step 4b

Final Cut Pro - Video Export Process
Exporting Video for Broadcast Classes
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Step 1

These are the settings for exporting your final project For Broadcast Class

Step 1
When you're finished editing and ready to export out of Final Cut Pro for your BROADCAST CLASS Go to FILE_EXPORT_QuickTime_Movie

Step 2
Select CURRENT SETTNGS, and leave all the other options the same, keep in mind these current settings are the settings of your Final Cut Project and are also the settings of your JVC HM100U (XDCAM EX 1080i60 VBR). Nothing needs to change. This will be your Master Clip from which all other encoded video will come from.
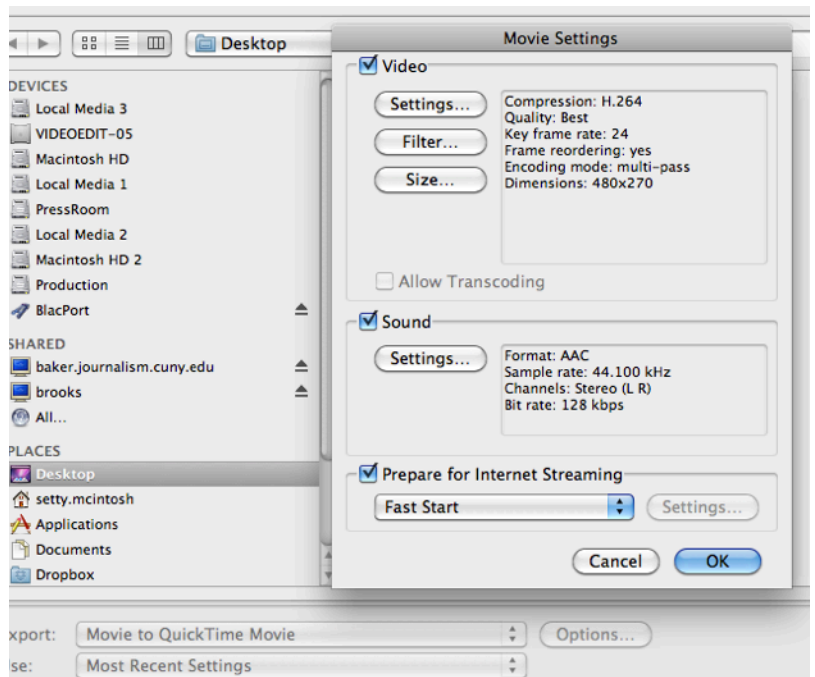
Step 2

Step 3
If you need to export your video to other settings, refer to the web settings in the previous pages or use whatever format is requested. You can do the exporting out of QuickTime Player7.

Open the file with QuickTime Player 7 and choose export. From there you can select whatever settings you choose. The setup is the similar to exporting from Final Cut Pro (Step 3b)

Step 3

Step 3b

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